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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Koichi Otsuki

Attorney Docket No.: MES1P047

Patent: 6,930,696 B2

Issued: August 16, 2005

Title: PRINTING UP TO EDGES OF PRINTING PAPER WITHOUT PLATEN SOILING

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on December 21, 2005 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed: Natalie Morgan

REQUEST FOR CERTIFICATE OF CORRECTION OF OFFICE MISTAKE (35 U.S.C. §254, 37 CFR §1.322)

Certificate
DEC 29 2005
of Correction

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Attn: Certificate of Correction

Dear Sir:

Attached is Form PTO-1050 (Certificate of Correction) at least one copy of which is suitable for printing. The errors together with the exact page and line number where the errors are shown correctly in the application file are as follows:

SPECIFICATION:

1. Column 20, line 42, change "The 20 position" to --The position--. This appears correctly in the patent application as filed on September 21, 2001, on page 41, line 20.

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CLAIMS:

1. In line 14 of claim 22 (column 45, line 39) change "recording bead" to --recording head--. This appears correctly in Amendment E as filed on November 5, 2004 on page 7, paragraph 1, line 3, as claim 20.

2. In line 12 of claim 29 (column 47, line 3) change "into main" to --in the main--. This appears correctly in Amendment E as filed on November 5, 2004, on page 11, paragraph 3, line 5, as claim 34.

3. In line 7 of claim 30 (column 47, line 33) change "an upstream edge" to --a downstream edge--. This appears correctly in Amendment E as filed on November 5, 2004, on page 12, paragraph 2, line 7, as claim 35.

4. In line 8 of claim 30 (column 47, line 34) change "the immage data" to --the image data--. This appears correctly in Amendment E as filed on November 5, 2004, on page 12, paragraph 2, line 8, as claim 35.

5. In line 30 of claim 35 (column 48, line 54) change "front one of and rear" to --front and/or rear--. This appears correctly in Amendment E as filed on November 5, 2004, on page 14, paragraph 3, line 4, as claim 40.

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Patentee hereby requests expedited issuance of the Certificate of Correction because the error lies with the Office and because the error is clearly disclosed in the records of the Office. As required for expedited issuance, enclosed is documentation that unequivocally supports the patentee's assertion without needing reference to the patent file wrapper.

It is noted that the above-identified errors were printing errors that apparently occurred during the printing process. Accordingly, it is believed that no fees are due in connection with the filing of this Request for Certificate of Correction. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. MES1P047).

Respectfully submitted,
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the printing paper P when the deficit of the feed increment is no more than two raster lines, as shown by the dashed line in Fig. 15.

[0087.]

It is the CPU 41 that prints images in the area (expanded area) beyond the lower edge Pr of the printing paper P in this manner. Specifically, the CPU 41 corresponds to the edge printing unit.

[0088.]

The two raster lines (seventh and eighth raster lines from bottom in Fig. 13) along the intended upper-edge position of the paper sheet are recorded by nozzle Nos. 7 and 8. It is therefore possible to prevent situations in which the ejected ink droplets Ip fall into the upstream slot 26f and deposit in the area occupied by the upper surface of the platen 26 when the feed increment of the printing paper P falls below the designed increment for any reason.

[0089.]

It is the CPU 41 that specifies the position of the printing paper P in the sub-scanning direction in the above-described manner such that the lower edge Pr of the printing paper P assumes a position above the opening of the upstream slot 26f during sub-scanning. The position assumed by the lower edge Pr is located downstream of the nozzles at the upstream edge in the sub-scanning direction. Specifically, the CPU 41 functions as a lower-edge positioning unit.

[0090.]

In the present embodiment, printing is completed when the seventh raster line, as counted from the downstream edge in the sub-scanning direction and selected from raster lines on which dots can be recorded by the nozzles of the print head 28, reaches the position occupied by the lower edge Pr of the printing paper (that is, a position two raster lines in front of nozzle No. 7 in Fig. 15) (see also Fig. 13). Consequently, images are printed as the sheet is fed in the sub-scanning direction solely with the downstream paper feed rollers 25c

JAN 0 4 2006

being configured to support the print medium at a position opposite the dot-recording head, and that has a slot extending in a main scanning direction , a width of the slot in a sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including not entirety but part of the plurality of dot-forming elements, and

(B) printing images along the edges whereby ink droplets are ejected from at least some of the dot-forming elements disposed at positions opposite the slot when a front or rear edge of the print medium is disposed above the slot opening, and dots are formed on the print medium,

wherein the specific sub-scanning range includes at least one of two end ranges in the sub-scanning at opposite ends of the dot-recording head, each end range including at least one dot-forming element, and

wherein the step (B) comprises the steps of:

(B1) effecting printing near an edge of the printing medium in a first recording mode, in the first recording mode the controller performing edge printing by ejecting ink droplets from at least some of the dot-forming elements disposed opposite the slot and without ejecting ink droplets from dot-forming elements other than the dot-forming elements disposed opposite the slot when the print medium is supported on the platen, and the edge of the print medium is disposed above the slot, wherein the dot-recording method further comprises

(C) effecting printing in an intermediate portion of the print medium in a second recording mode, a maximum sub-scan feed amount in the second recording mode being greater than a maximum sun-scan feed amount in the first recording mode.

21. (original) A dot-recording method as defined in Claim 20, wherein the step (B1) comprises a step of preventing ink droplets from being ejected by dot-forming elements other than the dot-forming elements disposed opposite the slot during the edge printing.

22. (original) A dot-recording method as defined in Claim 20, wherein the slot is disposed at a position opposite a dot-forming element that is located at a downstream edge in the sub-scanning direction; and the step (B1) comprises a step of performing the edge printing when a front edge of the print medium is disposed above the slot.

23. (original) A dot-recording method as defined in Claim 20, wherein the slot is disposed at a position opposite a dot-forming element that is located at an upstream edge in the sub-scanning direction; and the step (B1) comprises a step of performing the edge printing when a rear edge of the print medium is disposed above the slot.

JAN 0 4 2006

an image data generator for generating image data for an area outside the print medium beyond the edge on which [[the]] edge printing is performed

wherein the [[print control device]] controller has:

(a) a first recording mode to effect printing near an edge of the printing medium, in the first recording mode the print control device performing the edge printing by ejecting ink droplets from at least some of the dot-forming elements disposed opposite the slot and without ejecting ink droplets from dot-forming elements other than the dot-forming elements disposed opposite the slot, and

(b) a second recording mode to effect printing in an intermediate portion of the print medium.

34. (currently amended) A computer program product for recording ink dots on a surface of a print medium using a computer, the computer equipped with a dot-recording device for recording ink dots on the surface of a print medium with the aid of a dot-recording head provided with a plurality of dot-forming elements for ejecting ink droplets, wherein the dot-recording device comprises a platen configured to extend in the main scanning direction and to be disposed opposite the dot-forming elements at least along part of a main scan path, the platen being configured to support the print medium at a position opposite the dot-recording head, and being configured to have a slot extending in the main scanning direction , a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including not entirety but part of the plurality of dot-forming elements; the computer program product comprising:

a computer readable medium; and

a computer program stored on the computer readable medium, the computer program comprising:

an image data generating program for causing the computer to generate image data for an area outside the print medium beyond the edge on which the edge printing is performed

wherein the computer program has a program for implementing:

(a) a first recording mode to effect printing near an edge of the printing medium, in the first recording mode the [[controller]] computer performing edge printing by ejecting ink droplets from at least some of the dot-forming elements disposed opposite the slot and without ejecting ink droplets from dot-forming elements other than the dot-forming elements disposed opposite the slot, and

JAN 0 4 2006

(b) a second recording mode to effect printing in an intermediate portion of the print medium.

35. (currently amended) A computer program product as defined in Claim 34,

wherein ~~the dot-recording device comprises a platen configured to extend in the main scanning direction while disposed opposite the dot-forming elements at least along part of the main scan path, and~~ the platen [[being]] is configured to have an upstream slot at a position opposite a dot-forming element disposed at an upstream edge of the dot-recording head in the sub-scanning direction, and have a downstream slot at a position opposite a dot-forming element disposed at a downstream edge of the dot recording head in the sub-scanning direction; and wherein the image data generating program comprises

a first program for causing the computer to prepare print data containing the image data for recording images in an expanded area that extends lengthwise beyond at least front and rear edges of the print medium; and

a second program for causing the computer to eject ink droplets onto the expanded area on the basis of the print data.

36. (original) A computer program product as defined in Claim 35, the image data generating program further comprises:

a third program for causing the computer to set the position of the print medium in the sub-scanning direction such that when ink droplets are ejected onto the front edge of the print medium,

the print medium is supported on the platen,

the front edge of the print medium is brought to a point above the downstream slot, and

the front edge reaches a point located in the sub-scanning direction upstream of the dot-forming element on the downstream edge in the sub-scanning direction; and

a fourth program for causing the computer to set the position of the print medium in the sub-scanning direction such that when ink droplets are ejected onto the rear edge of the print medium,

the print medium is supported on the platen,

JAN 0 4 2006

a second support configured to support the print medium, the second support extending in the main scanning direction at a position opposite a third sub-group of dot-forming elements which are disposed in the sub-scanning direction downstream from the second sub-group of dot-forming elements; and

a second slot extending in the main scanning direction at a position opposite a fourth sub-group of dot-forming elements which are disposed in the sub-scanning direction downstream from the third sub-group of dot-forming elements, wherein the dot forming program comprises:

a first program for causing the computer to form dots on a print medium with the aid of the second to fourth sub-groups of dot-forming elements without the use of the first sub-group of dot-forming elements in accordance with a first image-printing mode for printing images without blank spaces up to front and/or rear edges of the print medium; and

a second program for causing the computer to form dots on the print medium with the aid of the first to fourth sub-groups of dot-forming elements in accordance with a second image-printing mode for printing images with blank spaces along the front and rear edges of the print medium.

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,930,696 B2 Page 1 of 1

DATED : August 16, 2005

INVENTOR(S) : Koichi Otsuki

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the Specifications:

Column 20, line 42, change "The 20 position" to --The position--.

In the Claims:

In line 14 of claim 22 (column 45, line 39) change "recording bead" to --recording head--.

In line 12 of claim 29 (column 47, line 3) change "into main" to --in the main--.

In line 7 of claim 30 (column 47, line 33) change "an upstream edge" to --a downstream edge--.

In line 8 of claim 30 (column 47, line 34) change "the immage data" to --the image data--.

In line 30 of claim 35 (column 48, line 54) change "front one of and rear" to --front and/or rear--.

MAILING ADDRESS OF SENDER:

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